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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/893,677      | 06/29/2001  | Makoto Tomioka       | 010680              | 9414             |

38834 7590 04/20/2005

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| EXAMINER |
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CATHEY II, PATRICK H

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| ART UNIT | PAPER NUMBER |
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2613

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/893,677

**Applicant(s)**

TOMIOKA ET AL.

**Examiner**

Patrick H. Cathey II

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

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## **DETAILED ACTION**

### ***Response to Amendment***

The amendment filed on October 29, 2004 under 37 CFR 1.131 is sufficient to overcome the Igarashi (US 5,902,232) reference.

The Claim's were amended adding the subject matter stating that the camera head includes a part of the relay optical system.

### ***Claim Objections***

Claim 1 is objected to because of the following informalities: The sentence in Claim 1 stating *in order from an object side thereof and in the direction of said front-end insertion section to said camera head* continues to be unclear as to the meaning and limitations of the claim. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim's 1 and 3-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Igarashi (US 5,902,232) in view of Takahashi et al. (US 5,588,948).

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As for Claim's 1 and 17, Igarashi (US 5,902,232) teaches a non-flexible endoscope for front-end insertion and a camera head that includes an objective optical system, a relay optical system, an imaging optical system and a solid-state image pickup device. Igarashi (US 5,902,232) also teaches the front-end insertion section with a camera head being able to be detached and replaceable in the region on the relay optical system (Column 8, lines 13-67; see also Figures 3 and 12).

Igarashi (US 5,902,232) fails to specifically teach where the camera head includes a part of the relay optical system, Takahashi et al. does (Figure 1). Since the relay optical system can be put together in many different methods including the method used in Igarashi (US 5,902,232), it would have been obvious to one of ordinary skill to, as long as the method included a camera head and relay optical lens system, include the relay optical system with the camera head in any order or method to use the same relay optical system and be able to remove a front-end insertion section.

As for Claim's 6, 10 and 11, Igarashi (US 5,902,232) teaches a non-flexible endoscope with a camera head including a visual field mask that is constructed to be moved in a focusing operation within part of the relay optical system. Igarashi (US 5,902,232) also teaches that this field mask can be placed in either the rear lens component or the front lens component. If at the front lens component it would be able to be placed at the front focal point of the front lens component (Column 16, lines 28-33 and 60-63; Column 23, lines 38-49).

As for Claim's 9 and 14, Igarashi (US 5,902,232) teaches an optical system consisting of a single negative lens and a single positive lens. Igarashi (US

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5,902,232) also teaches adding an additional negative or positive power to the lens. He also teaches that it would be alright to use a cemented lens component for the intended correction as well (Column 43, lines 22-33).

As for Claim 15, Igarashi (US 5,902,232) teaches an effective diameter of the lens element to be 7.4 mm which shows that the outer diameter of the front-end insertion section must be at least 6 mm (Column 48, Embodiment 24, line 52).

As for Claim 18, Igarashi (US 5,902,232) teaches the rays nearly being in parallel with one another between the front-end insertion section and the image pickup device (Column 18, lines 20-27).

As for Claim's 3-5, 7, 8, 12, 13 and 16, many of the limitations are stated in the above rejections. Although Igarashi (US 5,902,232) fails to teach the position of the view field mask and the imaging sensor being moved vertically with respect to the optical axis to allow focusing on the center of the image, Takahashi et al. does (Column 2, lines 42-55; Column 5, lines 46-55). Takahashi shows both the view field mask and the imaging sensor moving along the vertical axis. He also shows that they can rotate with respect to the camera head. Since it is well known that moving the view field mask or imaging sensor along the vertical axis will re-center the image according to where the view field mask or imaging sensor is on the respective vertical axis it would have been obvious to one of ordinary skill to center the image by moving the view field mask or imaging sensor vertically.

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Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Igarashi (US 5,902,232) in view of Takahashi et al. (US 5,588,948) and in further view of Igarashi (US 5,954,634).

Igarashi (US 5,902,232) teaches the movements of a visual field mask and the imaging optical system for a focusing operation, but he fails to teach the movements of the imaging sensor. Although Igarashi (US 5,902,232) and Takahashi et al. (US 5,588,948) fail to teach this, Igarashi (US 5,954,634) does (Column 4, lines 57-67). Since the difference between integrating the imaging sensor with the movements of the visual field mask and the optical system could just be the difference of focusing or magnification it would have been obvious to one of ordinary skill that the separate or integrated imaging sensor would achieve the same results.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action

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is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

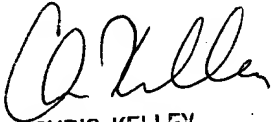
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick H. Cathey II whose telephone number is (571)272-7326. The examiner can normally be reached on M-F 7:30 to 5:00 (Every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (571)272-7331. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patrick H. Cathey II  
Examiner  
Art Unit 2613

PHC

  
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